

MILANOTELEPORT

THE NEW FRONTIER FOR VSAT COMMUNICATIONS

WE OFFER WORLDWIDE SATELLITE BROADBAND TO EARTH OR MARITIME STATIONS, FIXED OR MOBILE

WE GUARANTEE THE STABILITY OF THE CONNECTION SOLVING THE CRITICAL ISSUES THAT GENERALLY WIRELESS COMMUNICATIONS HAVE

TECHNOLOGICAL DEVELOPMENT

- State of the art technology integrated into our platform (Hubs)
- Configurable solutions to fit every need

COST

- Flexible structure
- Critical mass of resources
- Independence and direct relationship the satellite operators

COMPANY

- Independent operator since 1997, with the liberalization of the communications market
- Universal broadband solutions for audio, video and data via satellite
- Broadcasting and video turnaround services of broadcast channels in Europe and worldwide
- Satellite Systems Integrator
- The most important Teleport infrastructure in Milan



BUSINESS LINES



● TWO-WAY SATELLITE SERVICES

Over 1000 worldwide remote stations in the world registered to the satellite network of Milano Teleport with SCPC and TDMA, iDirect-based technology for data communication, voice (VoIP) and multimedia broadcasting (Corporate TV and Web Tv)



● MARITIME VSAT SERVICES

Over 200 vessels are now using iSeaGlobal™, a platform of communication services, broadband access for commercial fleets, passenger boats, support vessels and any other type of ship



● BROADCASTING SERVICES

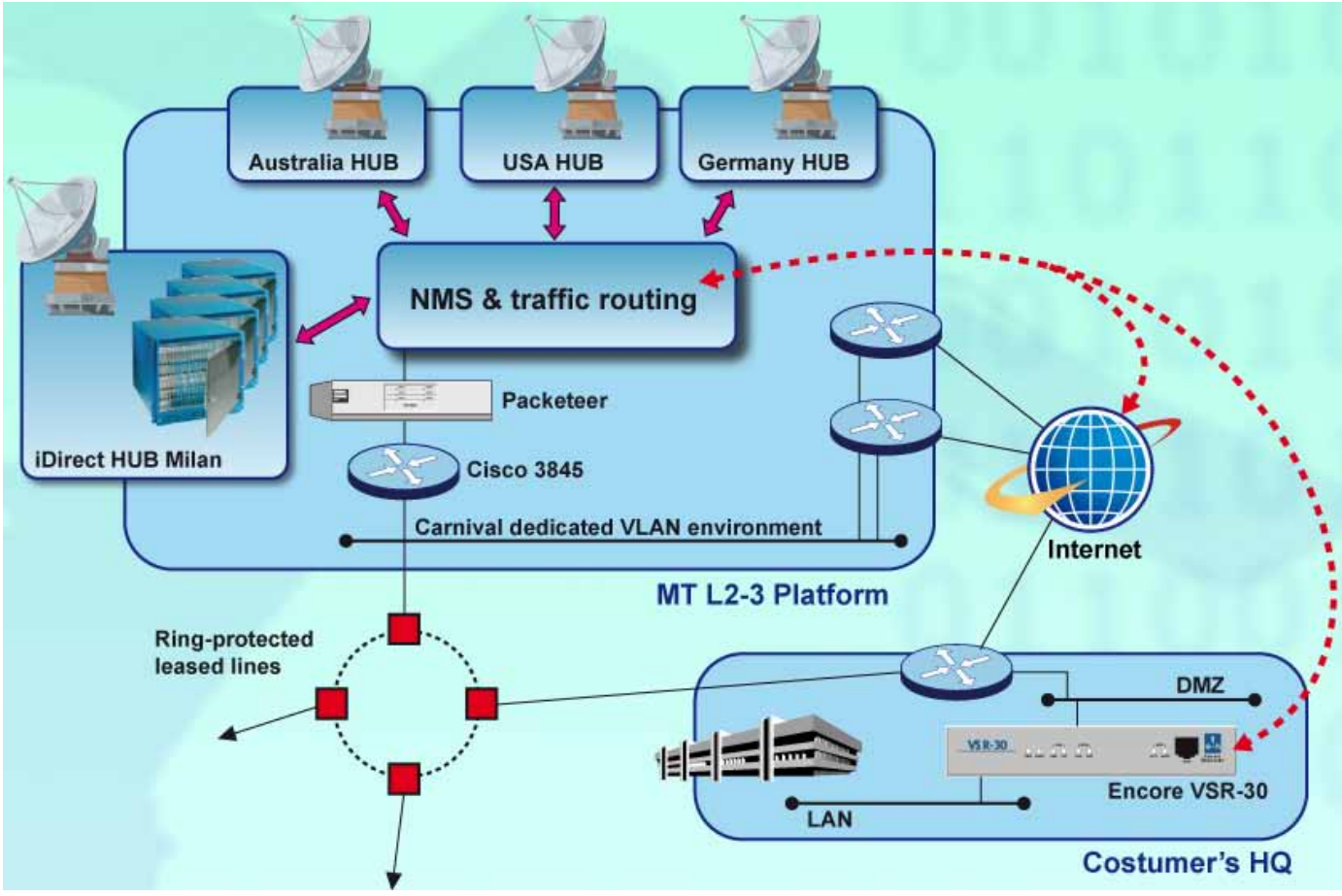
136 Mbps dedicated to the transmissions of DVB-S / DVB-S2 TV, radio and data (DTH - Direct To Home) channels, free to air and conditional access through Eutelsat and Astra

HUB OF MILAN

- Platform integrated with the two most advanced satellite technologies - iDirect infinity, iDirect Evolution
- 21 satellite dishes spread over an area of 2000 squaremeters
- Redundant Infrastructure (OSI Layers 1-2-3)
- Autonomous System - AS 49284
- Triple fiber optic connection to the main Italian and European (London, Frankfurt, Luxembourg) Internet (NAP - MIX) interchanges
- Copertura satellitare globale attraverso un network di primari teleporti partners
- Teleport Facility Controlled Access
- Highly skilled support and NOC team operating 24/7



HUB OF MILAN - PHYSICAL NETWORK DIAGRAM



TECHNOLOGIES

IDIRECT INFINITY TDM / TDMA-D PLATFORM

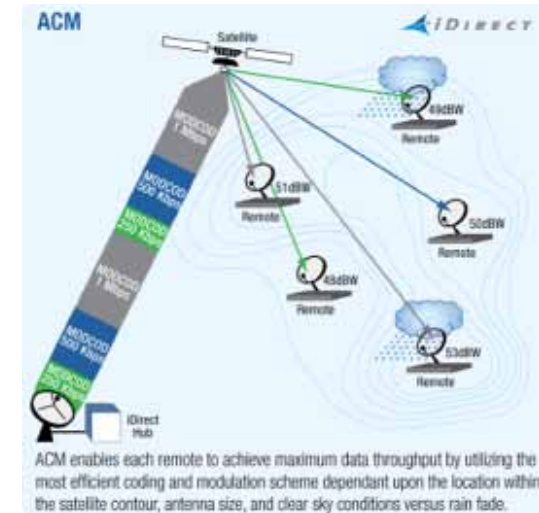
- Based on a proprietary protocol built on Level 2 for the transport of IP traffic
- Use of the D-TDMA access resolves the problem of packet collisions and increases the effective throughput of over 20%
- Turboencode encoding in both directions of transmission ensures high service availability even under the reception of poor signal
- TCP acceleration with increased throughput
- TRANSEC (Transmission Security)
- Inbound and Outbound shared channels: high efficiency and configuration flexibility with a consequent decrease of CAPEX
- Dynamic management of QoS



TECHNOLOGIES (CONT)

● IDIRECT EVOLUTION PLATFORM

- The architecture of satellite networks is based on iDirect DVB-S2 / ACM technology
- The DVB-S2 with iDirect's ACM (Adaptive Coding Modulation) is the ideal technology for networks that require more bandwidth
- The DVB-S2 is designed and developed around IP
- It uses a highly efficient encapsulation technique and technology FEC (Forward Error Coding), such as LDPC codes (low density Parity Check)
- DVB-S2 incorporates new modulations and FEC schemes supporting QSPK, 8PSK and 16APSK modulation on DVB-S2 downstream and allowing ACM to optimize the operating parameters
- ACM makes each remote reach the maximum speed using the most efficient encoding scheme and modulation at all times, depending on their position within the circuit satellite, antenna size and weather conditions
- Allows you to build next-generation satellite networks that significantly improve the bandwidth efficiency with lower operational costs



TECHNOLOGIES (CONT)

ENCORE

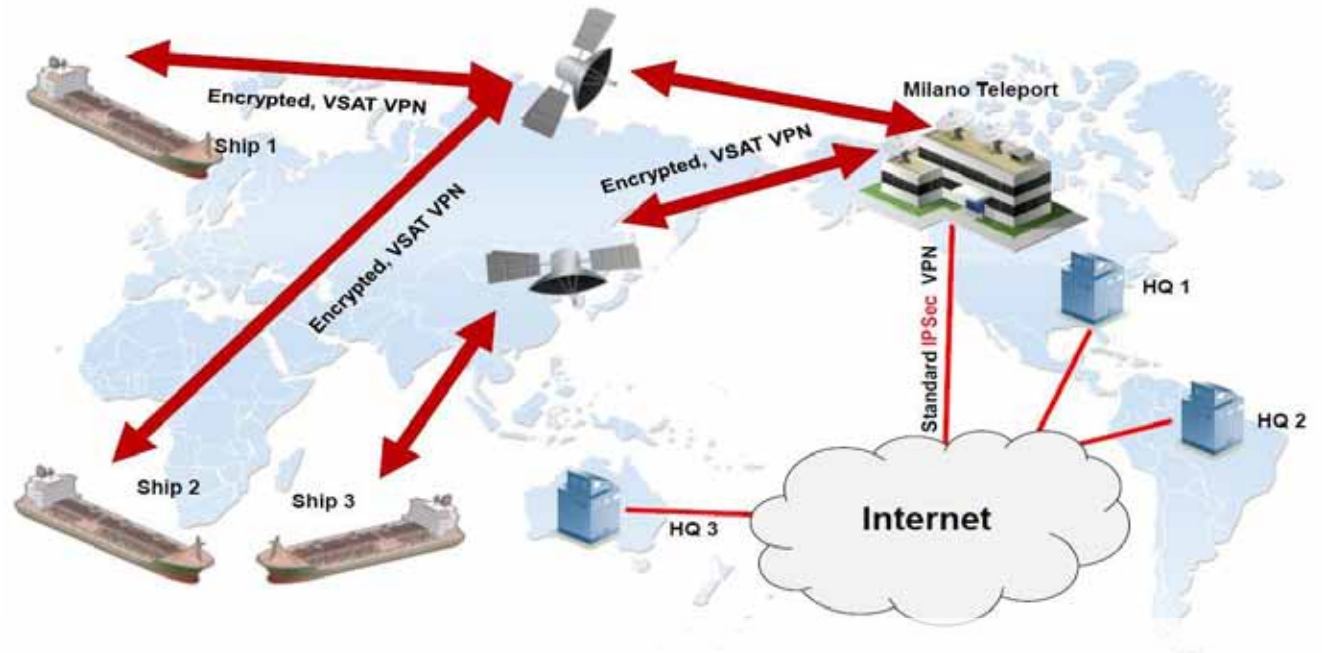
A technology that integrated with the iDirect platform allows to implement satellite IPsec VPN

IDIRECT AES/3DES ENCRYPTION CARD

A technology whose features allow multi-level security encoding

COMTECH

Based on a proprietary protocol designed to manage SCPC dedicated traffic



TOOLS MILANO TELEPORT

● Critical state of a satellite station on the move

- Moving from the range of one satellite to another
- Blockage Angle
- Variability of the signal strength
- Satellite interferences

Sat Jumper – MilanoTeleport Solution

● 2006 – SatJumper I

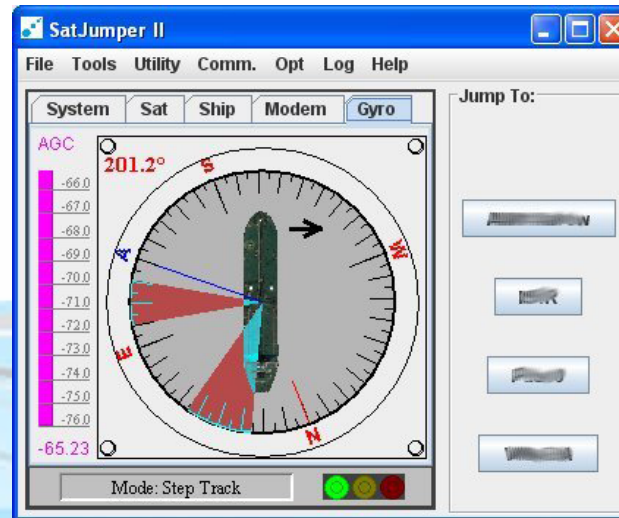
- First application capable of automatic satellite switch controlling Orbit Antenna and iDirect Modem

● 2009 – SatJumper II

- The evolution of SatJumper I
- Improved stability
- Compatible with SeaTel
- Easily expandable with any antenna and modem that supports telnet
- Smartest decisional algorithm

SatJumper®(CONT)

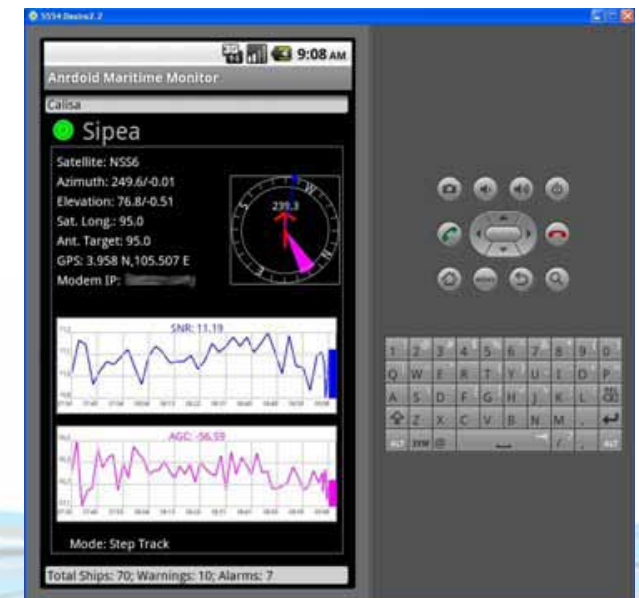
- The software tool SatJumper once installed takes care of all the operations necessary to automatically change satellite. It has a simple user interface that makes it easy to use.
- SatJumper monitors the modem and antenna, blockage angles and records the most important parameters
- If there is a fault in the VSAT, the presence of the SatJumper simplifies analysis by reducing the time needed to restore the system
- With this software MT has an average of 45 automatic satellite changes per day



TOOLS MILANO TELEPORT

Maritime Monitor

- Designed to monitor the RF performance of a fleet of VSAT
- Client/Server Application
- 100% Java - compatible as it is with different platforms
- Easy to use with an intuitive user interface
- NOC, Dealer, Client: Real-time monitoring with the same tool, without filters
- Available for PC and Android



MT SOLUTION

GSM MINI remote backhauling

Features

- Robust
- No moving parts
- Outdoor installation in difficult climates
- Fully modular
- Small and lightweight (5 kg)

Ideal uses

- Rural areas
- GSM Gap Filling in difficult urban areas
- In a Maritime context, maritime GSM cells designed for installation on big and small ships
- Oil & Gas
- Military Bases
- Emergency Services, Emergency Stations are designed to be put in place very quickly

Benefits

- Low OPEX (60% or more)
- Low CAPEX (60% or more)
- Rapid Installation
- No need for shelter
- No need for air conditioning
- No software
- Efficient IP backhauling on network satellite iDirect
- Optional available with solar panels



TWO-WAY SATELLITE SERVICES

GLOBAL COVERAGE



C-BAND

The standard coverage of the C-band VSAT service offered by TM is provided by three beams global: Pacific, Atlantic, Indian



KU-BAND

The KU-band standard coverage is supplied with any combination of the eight spot beams: Europe, North-West Africa, South-West Africa, South-East Africa, North-East Asia, Gulf of Mexico, North-East America, South America



TWO-WAY SERVICES EXAMPLES OF COVERAGES



HOT BIRD 6 @ 13° EAST



ASTRA 3B @ 23,5° EAST



TWO-WAY SERVICES EXAMPLES OF COVERAGES



ATLANTIC BIRD 4 @ 7° WEST



T11N @ 37,6° WEST, AFRICA BEAM



OPERATIONAL SCENARIOS

- Mobile satellite solutions to military and civilian camps supplied with fly away antennas

- Satellite backup connectivity in areas with no reliable land link



- Satellite connectivity for permanent military bases and centers of international cooperation in depressed areas

- Satellite solutions for first intervention in areas affected by natural disasters or wars

- Satellite solutions for mobile vehicles by land and by sea through the use of geostabilizzate- geostabilized antennas

- Development and implementation of remote hubs in key territories



OPERATIONAL SOLUTIONS

- High-Speed Data Transmission via Satellite
- Configurable solution for data encryption
- Internet point and telephony systems with prepaid solutions for civilian and military personnel
- Voice communications highly dynamic
- High-capacity solutions for the transmission of images in real time (tele-assistance, tele-diagnosis, Tele-Surveillance, Video-Conference)



- GSM / UMTS service, in areas not served through the use of pico-cells
- Expansion of data services (internet, email) in the operational area through Wireless Local Loop
- TV channels with private circuit or IP-TV
- Internet point and telephony systems with prepaid solutions for civilian and military personnel

REFERENZE

ASTRA



ENI



MOBY



PREMUDA



TELEMAR



COSTA



CALISA



FRATELLI D'AMATO



AUGUSTA DUE



TAMOIL



BANCA INTESA



D'AMICO SOC. DI NAVIG.



SIGNIS



FURTRANS



ALPINI



ESERCITO TEDESCO



CORSICA FERRIES



FAO



ESERCITO BELGA





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